WO 2005/012034 PCT/US2004/025720

What is claimed:

1. A head restraint assembly for a motor vehicle seat having a seat back, said head restraint assembly comprising:

- a support member removably securable to the seat back;
- a body portion including a foam cushion disposed adjacent said support member;
- a pivot tube fixedly secured to said support member, said pivot tube defining a pivot tube slot cut through said pivot tube;
- a torsion spring fixedly secured to said pivot tube and extending through a portion of said pivot tube;

a pivot rod disposed within said pivot tube, said pivot rod including a guide pin extending out of said pivot rod and received by said pivot tube slot, said pivot rod fixedly secured to said body portion such that rotation of said pivot rod with respect to said pivot tube pivots said body portion with respect to said support member to move said body portion between a use position and a tilted position.

- 2. A head restraint assembly as set forth in claim 1 wherein said pivot tube slot includes a primary segment and a secondary segment wherein the secondary segment is parallel to and spaced apart from said primary segment.
- 3. A head restraint as set forth in claim 2 wherein said pivot tube slot further includes a cross slot segment perpendicular to said primary and secondary segments, said cross slot segment defining a segment of said pivot slot connecting said primary segment to said secondary segment.
- 4. A head restraint assembly as set forth in claim 3 wherein said primary, secondary and cross slot segments form said pivot tube slot in a J-shape.
- 5. A head restraint assembly as set forth in claim 4 wherein said pivot tube includes a second slot cut therethrough.
- 6. A head restraint assembly as set forth in claim 5 wherein said second slot cuts through said pivot tube in a configuration identical to said J-shape of said pivot tube slot.

WO 2005/012034 PCT/US2004/025720

7. A head restraint assembly as set forth in claim 6 whercin said pivot rod includes a second guide pin positioned to extend through said second slot.

- 8. A head restraint assembly as set forth in claim 7 wherein said pivot rod includes a spring end abutting said torsion spring such that said torsion spring biases said pivot rod away therefrom.
- 9. A head restraint assembly as set forth in claim 8 wherein said body portion includes an internal cavity to allow said body portion to pivot with respect to said support member.
- 10. A head restraint assembly as set forth in claim 9 wherein said support member includes a vertical post having a distal end received by the seat back.
- 11. A head restraint assembly as set forth in claim 10 wherein said support member further includes a cross bar extending through a portion of said body portion.